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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,320	01/04/2006	Jan Gerrit Kortjes	4662-122	8420
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EXAMINER				
MOORE, WALTER A				
ART UNIT		PAPER NUMBER		
1794				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/563,320

Applicant(s)

KORTES ET AL.

Examiner

WALTER MOORE

Art Unit

1794

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 12-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

RESPONSE TO AMENDMENT

Response to Amendment

1. Claims 1-10 and 12-25 are pending. Claim 11 was canceled and claims 1, 2, 5, and 6 were amended in the response filed on 24 June 2009.

Withdrawn Rejections

2. The 35 USC 112 rejection of claims 1-25 made in the office action, mailed on 1 April 2009, are withdrawn due to applicant's amendments.

3. The 35 USC 102 rejection of claim 11 over Potman, USPN 5,288,509 as evidenced by "Creaminess: A Question of Flavor" (Prepared Foods, July 1992) is withdrawn due to applicant's cancellation of claim 11 in the response filed on 24 June 2009.

4. The 35 USC 103 rejection of claims 1-3 and 8-11 over Aoyanagi, JP 2002-101846, made of record in the office action, mailed 1 April 2009, is withdrawn due to applicant's argument.

5. The 35 USC 103 rejection of claims 2-3, 12-16, and 21-25 over Potman, USPN 5,288,509 in view of Aoyanagi, JP 2002-101846 and Thermal Process Flavorings (Food Flavorings (3rd Edition), Chapter 9, pages 283-325) made of record in the office action, mailed 1 April 2009, is withdrawn due to applicant's argument.

6. The 35 USC 103 rejection of claim 11 over Aoyanagi, JP 2002-101846; and Kortess, WO 03/063614, made of record in the office action, mailed on 1 April 2009, is withdrawn due to applicant's cancellation of claim 11 in the response filed on 24 June 2009.
7. The 35 USC 103 rejection of claims 2-3, 12-16, and 21-25 over Potman, USPN 5,288,509, in view of Aoyanagi, JP 2002-101846 A; citations are toward the machine translated text) and Thermal Process Flavorings (Food Flavorings (3rd Edition), Chapter 9, pages 283-325) made of record in the office action, mailed 1 April 2009, is withdrawn due to applicant's argument.

Rejections

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

9. Claims 1-7 and 12-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because it is unclear how a yeast extract that has a flavor, namely a 5' ribonucleotide, can be added to a food composition and "not" provide "any taste" of a yeast extract. In other words, the claim is disclaiming an inherent property of the 5' ribonucleotide, i.e. taste. See for example: Potman, USPN 5,288,509, disclosing 5' ribonucleotide alters taste (col. 1, ln. 18-21); Ninomiya, USPA 2004/0166200, stating 5'-ribonucleotides convey a bouillon-like

savory taste (p. 3, para 0045); and Kanemaru et al., USPN 4,842,881, stating: "Flavorant 5'-ribonucleotides such as sodium 5'-inosinate and sodium 5'-guanylate . . . have their own characteristic tastes" (col. 1, ln. 10-12).

Claim Rejections - 35 USC § 102

10. Claims 1 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Potman, USPN 5,288,509, as evidenced by Kortes et al., WO 03/063614.

Regarding claims 1 and 8, Potman teaches adding a yeast extract to a food composition (col. 4, ln. 41-43). Potman teaches a yeast extract comprising 5-80% by weight free amino acids and 0.1-15% by weight of a 5'-ribonucleotide (guanosine-5'- monophosphate, col 4, lines 15-22). Potman teaches the yeast extract can be added to food compositions like margarine, soups, meats, gravies, frying fat, confectionary products, and cheese (col. 4, ln. 44-46).

Regarding the reduced fat limitation, it is the examiner's position that when an additional component is added to a food the total percentage of fat by weight necessarily decreases relative to its initial level.

Potman is silent on the mouth feel of the yeast extract and 5' ribonucleotide. However, Kortes teaches guanosine-5'- monophosphate (5'-GMP) contributes mouth feel to food (p. 1, ln. 22-24).

Although Potman does not explicitly teach the yeast extract lacks a yeast taste, it is reasonable to presume that said limitations are inherent to the invention. Support for said presumption is found in the use of similar materials (i.e. *Saccharomyces*, *Kluyveromyces*, and *Candida*, col. 2, ln. 24-25) as disclosed. The burden is upon the Applicant to prove otherwise.

MPEP 2112. Furthermore, Kortes discloses a yeast extract made of *Saccharomyces*, *Kluyveromyces*, and *Candida* (Kortes, 2, ln. 25) lacks a taste (Kortes, p. 2, ln. 7).

Regarding claim 7, Potman does not indicate any salt in the yeast extract. Therefore, Potman reads on a sodium chloride content of less than 8%.

Regarding claims 9 and 10, Potman teaches adding the yeast to a dairy product (cheese, col. 4, ln. 46) and a bakery product (col. 4, ln. 45-46).

11. Claims 1-8 and 12-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Kortes et al., WO 03/063614 A1, as evidenced by DSM Food Specialties Maxarome® Yeast Extract (http://www.dsm.com/en_US/html/dfs/news_items/maxarome_fi_asia.htm, publication date Oct. 18, 2002; http://www.dsm.com/en_US/html/dfs/si-maxarome.htm).

The applied reference(s) has a common assignee and inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1-8 and 12-25, Kortes teaches a yeast extract having free amino acids and at least 10% w/w of 5'-ribonucleotides (p. 3, ln. 7) that is added to foods that include: diet/light beverages (p. 5, ln. 18-23) and soups, sauces, marinades, meat, and gravy (p. 1, ln. 29-30). Kortes teaches the yeast extract does not provide a taste of yeast (p. 2, ln. 6). Although Kortes does not teach the relative change in fat percentage, any additional component added to a

fat containing food, like meat, will reduce the total percentage of fat on a total weight basis compared to the same food with no additive. Kortes teaches the composition improves the mouthfeel in foods (p. 12, ln. 15).

Furthermore, Kortes discloses a method of improving the taste and fullness of a diet or light beverage through addition of a yeast extract with the above described composition, Maxarome® Plus LS powder manufactured by DSM Food Specialties (pp. 6-9 Examples), which is one of the disclosed yeast extract/ribonucleotide compositions.

DSM Food Specialties reveals the Maxarome® product line of yeast extracts is a high 5'-nucleotide containing yeast extract that has taste profiles varying from "ultra clean and neutral to intrinsic bouillon/broth notes", where in October, 2002, DSM teaches addition of Maxarome® to fish, vegetables, and dairy foods for natural flavor enhancement, "improved mouthfeel and umami sensation" with a "clean, neutral taste" that acts by "rounding off" and "harmonizing each different flavor characteristic" of the food product to which it is added; and further, because Maxarome® contains no synthetic notes, it renders the overall flavor system more authentic to the original.

Kortes teaches that such 5'-nucleotide rich yeast extracts "find their application in soups, sauces, marinades, flavor seasonings, meat, vegetables, and gravies" (p. 1) and also provides an example where the texture and mouth feel of tomato juice is enhanced through the addition of 5'-nucleotide containing yeast extract (Example 2, pp. 7-8).

Regarding claim 3, Kortes teaches the yeast extract comprises at least 10% 5'GMP and optionally, 5'-IMP (p. 3, ln. 7-8).

Regarding claims 4, and 17-20, Kortes teaches the protein hydrolysis is between 5% and 45% (p. 4, ln. 2).

Regarding claims 5, 6, and 21-23, Kortes teaches the ratio of 5'GMP to 5'IMP is lower than 2 (p. 4, ln. 26).

Regarding claim 7, Kortes teaches the yeast extract has less than 8% salt (p. 4, ln. 30-31).

Regarding claim 8, Kortes teaches a food (p. 9, Example 4) obtained by adding a yeast extract comprising free amino acids and 8.5% 5' ribonucleotide (p. 9, ln. 25-26).

Regarding claims 12-16, Kortes teaches the yeast extract comprises at least 10% 5'ribonucleotide (p. 2, ln. 15). Kortes teaches the yeast extract comprises 5'GMP and optionally 5'IMP (p. 2, ln. 16-17).

Regarding claims 21-25, Kortes teaches the ratio of protein to the 5'ribonucleotides is 2.2 (2.2= [55% protein based on hydrolysis of 45%, p. 4, ln. 2]/[25% 5'ribonucleotides, p. 4, ln. 13]).

Claim Rejections - 35 USC § 103

12. Claims 2-6 and 12-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potman, USP 5,288,509, as evidenced by Kortes et al., WO 03/063614.

Potman as evidenced by Kortes is relied on as above.

Regarding claims 2-3 and 12-16, Potman teaches the yeast extract has between 0.1-15% of 5'-ribonucleotides (5'GMP, col. 4, ln. 21).

Regarding claims 4 and 17-20, Potman teaches the degree of protein hydrolysis is between 20% and 95% (100-5 = 95 and 100-80 = 20; col. 4, ln. 18-20).

Regarding claims 21-23, Potman teaches the ratio of free amino acids to 5'GMP is between .33 ($0.33 = 5\%/15\%$; col. 4, ln. 18-21) and 800 ($800 = 80\%/1\%$).

Regarding claims 6 and 24-25, Potman teaches the ratio between the protein percent and the percent of 5'GMP is between 1.33 ($1.33 = 20\%/15\%$; col. 4, ln. 18-21) and 840 ($84\%/0.01\%$).

Potman fails to teach a range of 5'ribonucleotides (claims 2-3 and 12-16); degree of protein hydrolysis (claims 4 and 17-20); amino acid ratio (claims 21-23); or protein ratio (claims 24-25) that is sufficiently specific to anticipate the presently claimed ranges. Moreover, Potman fails to disclose an anticipatory example. However, the range of 5'ribonucleotides (claims 2-3 and 12-16); degree of protein hydrolysis (claims 17-20); amino acid ratio (claims 21-23); or protein ratio (claims 24-25) taught by Potman overlaps the presently claimed range, and overlapping ranges have been held to establish prima facie obviousness. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected from the overlapping portion of the range taught by the reference because overlapping ranges have been held to establish prima facie obviousness. MPEP 2144.05.

Regarding claim 5, Potman does not disclose the yeast extract comprises IMP. Therefore, Potman is not required to teach the further limitation of the optional component.

13. Claims 4, 7, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Potman, USPN 5,288,509, as evidenced by Kortes et al., WO 03/063614, in view of Thermal Process Flavorings (Food Flavorings (3rd Edition), Chapter 9, pages 283-325).

Potman as evidenced by Kortes is relied on as above.

Potman does not expressly disclose the degree of protein hydrolysis. However, the degree of protein hydrolysis can be represented by the amount of free amino acids and peptides in the yeast extract.

Thermal Process Flavorings, discloses that Autolyzed Yeast Extracts or Yeast Extracts as specified in the *Food Chemical Codex* have the following properties (*Food Flavorings*, Chapter 9.10.3, p. 317):

Functional use in foods: Flavoring agent; flavor enhancer.

Requirements: Calculate all analyses on the dry basis. In a suitable tared container, evaporate liquid and paste samples to dryness on a steam bath, then, as for powdered and granular form, dry to constant weight at 105° C.

Assay (protein): Not less than 42.0% protein.

α -Amino nitrogen/total nitrogen (AN/TN) percent ratio: Not less than 15.0% or more than 55.0%.

Ammonia nitrogen: Not more than 2.0% calculated on a dry, salt-free basis.

Glutamic acid: Not more than 12.0% as $C_5H_9NO_4$ and not more than 28.0% of the total amino acids.

Heavy metals (as Pb): Not more than 10 mg/kg.

Insoluble matter: Not more than 2%.

Lead: Not more than 3 mg/kg.

Mercury: Not more than 3 mg/kg.

Microbial limits:

Aerobic Plate Count: Not more than 50,000 CFU per gram.

Coliforms: Not more than 10 per gram.

Yeast and molds: Not more than 50 CFU per gram.

Salmonella: Negative in 25 g.

Potassium: Not more than 13.0%.

Sodium: Not more than 20.0%.

Thermal teaches that such extracts have a free amino acid (AN) to total protein (TN) ratio not less than 15% and not more than 55%, which one having ordinary skill in the art would readily recognize as a measure of the degree of protein hydrolysis. Therefore *Thermal* teaches that a desirable degree of hydrolysis of the protein content in yeast extracts used as flavor

enhancers is within the Applicant's claimed range of up to 50% absent evidence to suggest otherwise.

Regarding claim 7, Potman is silent regarding the sodium chloride content in the yeast extract, and therefore as discussed above teaches a yeast extract that has at most 8% sodium chloride.

Where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges of protein hydrolysis involves only routine skill in the art. Therefore, absent evidence of criticality, it would have been obvious to one of ordinary skill in the art at the time of invention to optimize the degree of protein hydrolysis to obtain a yeast extract with a protein hydrolysis of between 5% and 45% because it has been held that the discovery the optimum or working ranges of involves only routine skill in the art.

14. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kortes et al., WO 03/063614.

Kortes is relied on as above.

Kortes teaches application of the method to foods including soups, sauces, marinades, flavor seasonings, meat, vegetables, and gravies (p. 1, ln. 29-30) in addition to providing examples where the yeast extract is added to diet or light beverages. Kortes teaches the yeast extract enhances food flavor (p. 1, ln. 23) without providing a bouillon flavor to the food (p. 3, ln. 13).

Kortes further discloses that the addition of 5'-nucleotide rich yeast extracts to such beverages beneficially enhances the natural flavor profiles without adding a yeasty flavor. It

would have been obvious to one of ordinary skill in the art at the time of invention to use the yeast extract in foods other than beverages. One of ordinary skill in the art would have been motivated to use the yeast extract in other foods because the yeast extract naturally enhance flavors without adding a different bouillon-like taste to the product.

Examiner's Comment

15. Regarding the rejection of claim 10 over Potman, the heading of the previous office action appears to have a typographical error as the heading rejected claims 1, 7-9 and 11 as being anticipated by Potman, see office action mailed 1 April 2009, page 6, paragraph 2. It appears to be a typographical error for several reasons. First, the examiner rejected claims 1 and 8-11 as being anticipated by Potman, see office action mailed on 16 October 2008, page 4, paragraph 8. Second, the examiner maintained the rejection over claims 1, 8-11 as anticipated by Potman, see office action mailed 1 April 2009, page 21, paragraph 11. Therefore, the examiner did not withdraw the rejection of claim 10 over Potman. Additionally, the applicant did not provide any argument regarding claim 10 over Potman (which clearly states the food can be a bakery product, Potman, col. 4, ln. 45-46).

Response to Arguments

16. Applicant's arguments regarding the section 102 rejection of claims 1, 7-9, and 11 over Potman as evidenced by Prepared Foods, filed 24 June 2009, have been fully considered but they are not persuasive.

The examiner notes the rejection has changed the evidence reference do to the applicant's amendment, filed on 24 June 2009. The applicant's amendment deleted the phrase "in the taste and/or in the aroma". The prior office action, mailed on 1 April 2009, used the reference "Creaminess: A Question of Flavor" (Prepared Foods, July 1992 to demonstrate the yeast and 5' ribonucleotide had a flavor. The amended claims claim the yeast and 5' ribonucleotide have a mouth feel.

Applicant's argue Potman is drawn to a method of making a yeast extract and not to the claimed method (p. 6, paragraph 2-3). However, Potman clearly teaches adding the prepared yeast to a food composition. The fact that Potman does not actually evaluate the mouth feel of the food does not distinguish Potman from the claimed invention. As evidenced by Kortes, the mouth feel is present in the yeast extract having 5' ribonucleotide composition.

17. Applicant arguments regarding the 35 USC 102 rejection of claims 1-8 and 12-25 over Kortes, have been fully considered but they are not persuasive.

Kortes states the yeast extract composition has use in a variety of foods (see rejection above). Once an additional component is added to a food the total percentage of fat by weight necessarily decreases. The claims are not claiming are merely claiming adding yeast extract, amino acids, and 5' ribonucleotides to a food product. The claims do not claim an amount of fat reduction or even a fat level of the "full-fat" food. The claims do not provide for a food perfection step beyond the addition of the listed additives. Therefore, Kortes teaches a method of adding a yeast extract and a 5' ribonucleotide to a food composition, which thereby reduces the fat content of the food relative to the fat content that existed prior to the addition of the yeast, amino acids, and ribonucleotide.

Applicant also argues that the invention of Kortes is not a reduced fat food as the terms is "defined" in the specification. Applicant argues the specification defines a food with reduces amount of fat as a food which 25% less fat (Remarks, p. 7, 3rd paragraph). However, the referenced section of the specification (p. 4, ln. 9-11) is not a definition. The specification merely suggests that a food with a reduced amount of fat comprises at least 25% less fat (p. 4, ln. 8), 50% less fat (p. 4, ln. 10), 95% less fat (p. 4, ln. 11), or 100% less fat (p. 3, ln. 12). Therefore, the examiner is not importing the preferred amounts of fat reduction, as suggested in the specification, as a definition of a term in the claims.

18. Applicant's arguments regarding the 35 USC 103 rejection of claims 1-3 and 8-11 over Aoyanagi, remarks page 7, filed 24 June 2009, have been fully considered and are persuasive. The rejection of claims 1-3 and 8-11 over Aoyanagi has been withdrawn.

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WALTER MOORE whose telephone number is (571) 270-7372. The examiner can normally be reached on Monday-Thursday 9:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/W.M./
Walter Moore, Examiner AU 1794
11/3/2009

/Alicia Chevalier/
Primary Examiner, Art Unit 1794